SMALLPOX



Evaluation of Takes and Non-Takes

A "take" or "major reaction" indicates successful vaccination and is characterized by a pustular lesion or an area of definite induration or congestion surrounding a central lesion, which can be a scab or an ulcer. All other responses should be considered "non-takes." "Non-takes" can be caused by improper vaccination technique, use of vaccine that has lost its potency, or residual vaccinial immunity among previously vaccinated persons. Persons with a "non-take" cannot be presumed to be immune to smallpox, and revaccination is recommended.

It is recommended that "take" evaluation for both first-time vaccinees and revaccinees be done on day 6, 7, or 8 following vaccination. Vaccine site evaluations on other days may not be reliable. If the evaluation is done too early (e.g., <6 days postvaccination), certain "non-takes" may look reactive because of dermal hypersensitivity to vaccinial proteins. These reactions are sometimes referred to as immediate reactions but are not successful "takes." If "take" evaluation is done too late (e.g., >8 days postvaccination), the vaccination "take" might be missed among previously vaccinated persons who can experience an accelerated successful take reaction at the vaccination site if they still have partial immunity to vaccinia.

The two images below both clearly demonstrate a central lesion and thus qualify as "takes."





The image below has an area of erythema but no central lesion and is classified as a "non-take."



The image below has neither erythema nor a central lesion and is classified as a "non-take."



Source: Color Images: Ramzy Azar, LTJG, MSC, United States Navy: National Naval Medical Center, Bethesda, MD; Black and white image: Stephen Heyse, MD, National Institutes of Health Page last reviewed August 5, 2004